

REMARKS

Claims 1-14 and new claims 15-21 are pending. The support in the original specification for the amendments and new claims is as follows: Claim 1: claim 4; Claims 11, 13: deleting subject matter; new Claim 15: claims 1-3; Claims 16, 19: p.6, lines 9-12; Claims 17, 20: p.6, lines 18-20; and Claims 18, 21: p.9-10. No new matter is added.

All rejected dependent claims depend on Claims 1 or 15 directly or indirectly. Those dependent claims are believed to be allowable, because Claims 1 and 15 are believed to be allowable for the reasons explained below.

Assuming Claims 1 to 4, 11, 12 and 15 to 21 are in condition for allowance, rejoinder of Claims 5 to 10, 13 and 14 is respectfully requested.

The applicant appreciates the Examiner's correction and acknowledgement on April 2, 2010 of reference AL on the June 20, 2006 PTO-1449 form. However, it would be appreciated if the document could be corrected and acknowledged again to reflect the correct document number, JP2004-35849. The Applicant regrets any confusion caused by this second request.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. (Office Action, page 3)

Claim 11 has been amended by deleting the word "substantially" thereby making this rejection now moot.

Claims 1 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Kurata et al (US 5,133,805) as evidenced by Inoue et al (US 5,549,739) and Schrempp et al (US 3,849,150). (Office Action, page 4)

Claim 1 has been amended with part of the subject matter of claim 4 making this anticipation now moot.

The Office Action stated that Kurata discloses a paint composition comprising a plate-like iron oxide pigment which has an upper bound average particle diameter of 5.0 microns and an upper bound average lamellar thickness of 500 Å. The Office Action further stated that the pigment disclosed by Kurata is a metal, while Kurata does not explicitly disclose the pigment as

a "metal" as presently claimed. Support for the Examiner's position is found in Inoue et al (US 5,549,739) wherein iron oxide is disclosed as a metal pigment (Col. 4, lines 11-12). Thus, based on the dimensions disclosed by Kurata and evidenced in Inoue, it is alleged in the rejection that the pigment disclosed by Kurata is metal thin film fragments as presently recited.

However, the examples of a metal thin film do not include a film of metal oxide as follows. Examples of pigment include many kinds of metal pigments. Concretely, examples of metal pigments include metal powders, metal coated substances, metal oxide, metal complex and the like. Accordingly, as stated in the Office Action, examples of a "metal pigment" include iron oxide.

On the other hand, a person skilled in the art understands that "metal thin film" means a film made of metal or a film made of alloy in general. That is, fragments of a "metal thin film" mean fragments of a metal film or an alloy film in general. In general, examples of a metal thin film do not include an iron oxide film.

In addition, please refer to the recitation on page 6, lines 8 to 20 of the present specification. From the following recitation, it clear that the metal thin film disclosed in the claimed invention means a thin film made of metal. In addition, these characteristics are clearly disclosed in the new dependent claims.

Examples of metal of metal thin film fragments used in the high-brightness ink of the present invention include aluminum, gold, silver, copper, brass, titanium, chromium, nickel, nickelchromium and stainless steel. Examples of the method of forming metal into a thin film includes a deposition method usable for metal having a low melting point such as aluminum, a malleation method usable for metal having malleability such as gold, silver or copper, and a sputtering method usable for metal which has a high melting point and has no malleability. Among these, metal thin film fragments obtained from the vapor-deposited metal thin film are preferably used.

Regarding Kurata, the Office Action stated that "while the reference does not disclose that the melamine resin is a binder as presently claimed, it is clear the Examiner's position is that the resin disclosed by the reference is a binder as presently claimed. Support for the Examiner's position is found in Schrempp et al which discloses that a melamine resin is a binder..."

The recitation of Schrempp is insufficient to support that a melamine resin is preferably used as a binder resin of Kurata. In general, "a binder" or "a binder resin" means a resin which is used as a main resin to bind (fix) other components. Such a word "binder" means the specific use of a resin for fixing other components. Even if a melamine resin is disclosed as "a binder" in Schrempp, the disclosure of Schrempp does not mean that a melamine resin can be used to bind components which are not disclosed in Schrempp.

The combination of Kurata and Inoue fails to disclose the characteristics of the claimed invention, that is, fragments of a metal thin film. Furthermore, the combination of Kurata, Inoue and Schrempp fails to disclose that a melamine resin is used to fix the fragments of a metal thin film. Claim 1 as a whole is not disclosed by Kurata, Inoue and Schrempp alone or in combination. Accordingly, there can be no anticipation and Claim 1 is believed to be allowable.

It is respectfully requested that the rejection withdrawn.

Claims 1 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miekka et al (US 5,672,410) in view of Leach et al (see attached pages of The Printing Ink Manual). (Office Action, page 7)

Claim 1 has been amended with part of the subject matter of claim 4 making this rejection now moot.

Claims 1, 4, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nowak et al (US 6,503,965) in view of Schrempp et al (US 3,849,150). (Office Action, page 9)

As described above, a "binder resin " means that the resin is used as a main resin to fix other components in the composition wherein the binder resin is included. Nowak does not disclose that a melamine resin is used as a binder resin, nor a main resin for fixing metal pigment. Schrempp discloses that a melamine resin can be used as a main resin in the composition of Schrempp, wherein *metal pigment is not used*. In both Schrempp and Nowak, there is no disclosure that the melamine resin can function as a binder for a metal pigment. Unexpected effects of the combination of metal thin film fragments and a specific binder resin such as high-brightness mirror-like metallic luster, excellent adhesion between metal thin film fragments and a binder resin, and high peel strength are not disclosed in the cited references.

Furthermore, Nowak and Schrempp fail to disclose that a binder resin contains 50 to 500 mmol/kg of at least one selected from the group consisting of a carboxyl group, a phosphoric acid group, a sulfonic acid group, metal salts thereof and an amino group.

When the amount of the aforementioned group included in the binder resin is less than 50 mmol/kg, the effect for increasing the peel strength is small, and when the amount of the aforementioned group in the binder resin is over 500 mmol/kg, thickening or gelation of an ink including the resin and the fragments tends to be caused.

Thus, the combined teachings or suggestions of Nowak and Schrempp do not teach Claim 1 as a whole. Claim 1 is not at all taught or suggested by Nowak with Schrempp alone or in combination.

It is respectfully requested that the rejection be reconsidered and withdrawn.

Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nowak et al (US 6,503,965) and Schrempp et al (US 3,849,150) as applied to claims 1, 4, and 11 above, and in view of Molloy et al (US 6,476,096). (Office Action, page 11)

For several reasons, including the fact that Claim 1 has been amended with part of the subject matter of claim 4, the cited art does not teach the invention now claimed. Furthermore, Nowak relates to ink for writing instruments, Molloy relates to ink jet printer ink and Schrempp relates to pigment pastes for printing inks and varnishes. As explained above, the claimed ink for molded articles is not suggested, even if, assuming *arguendo*, it were feasible to combine the very different ink compositions of Nowak, Schrempp and Molloy, which is not.

As described above, the combination of Nowak and Schrempp fails to disclose that a melamine resin is used as a binder resin (matrix resin) for metal thin film fragments. Furthermore, Molloy also fails to disclose a melamine and metal thin film fragments and also fails to disclose that a melamine resin is used as a binder resin (matrix resin) for metal thin film fragments.

In addition, Nowak, Schrempp and Molloy fail to disclose that an ink include an acid anhydride so that the ink contains 0.01 to 30% by mass of an acid anhydride moiety as a -C(=O)OC(=O)- group in the acid anhydride based on the metal thin film fragments.

Further, the combined teachings or suggestions of Nowak, Schrempp and Molloy do not logically teach new Claim 15 as a whole. Claim 15 is not taught or suggested by Nowak,

Schrempp and Molloy alone or in combination. Accordingly, Claim 15 is believed to be allowable.

It is respectfully requested that the rejection be reconsidered and withdrawn.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1105.

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Customer No. 21874

Respectfully submitted,

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